

## REMARKS

The Applicant has filed the present Response in reply to the outstanding Official Action of June 21, 2004, and the Applicant believes the Response to be fully responsive to the Official Action for reasons set forth below in greater detail.

At the outset, prior to addressing the rejections over the prior art, the applicant calls to the Examiner's attention that Claims 1, 3, 5, 6, 7, 8, 10, 15, 16, 17 and 20-22 have been amended. The Examiner objected to Claims 6-8, 10, and 15-24 because of several informalities. Claims 6, 7, 10, 16, 17, 20, and 24 have been amended as suggested by the Examiner to overcome the claim objections. These amendments were editorial corrections to the claims. Applicant notes that the Examiner's objection to Claim 15 is obviated by the removal of the objected phrase from the claim.

In the outstanding Official Action, the Examiner rejected Claims 1-10, and 15-24 under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement, as the claims contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, to make or use the invention.

On September 21, 2004, Applicant spoke to the Examiner via a telephonic interview discussing the amendments to the claims to overcome the §112 rejections. Based upon said discussion, the amendments to the claims are made herewith.

Claims 1, 3, 15 and 17 have been amended herewith. Specifically, the phrase "wherein said improved power consumption levels and sampling frequency is caused by said phase shift where the sampling frequency is minimized or lowered by said phase shift and as a result the

power consumption level is reduced” has been removed. The limitation is not needed to distinguish the claim from the cited prior art.

In addition, Claims 5 and 19 have been amended incorporating the subject matter of Claims 2 and 16, respectively, as suggested by the Examiner during our telephone interview. The phrase, “a phase shifter for causing phase shift of said base band signal on the basis of a result of comparison by said comparing portion” as recited in original Claim 2 was amended to recite “phase shifting of said digital transmission signal” as originally recited in Claim 5. A corresponding amendment was made to Claim 19. This amendment captures the spirit of the original claims while overcoming the § 112 rejections.

The Examiner also rejected Claims 1-10 and 15-24 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention.

With regard to the rejections of Claims 1, 3, 15, and 17, the aforementioned amendments obviate the rejection.

Claim 3 also has been amended to provide antecedent basis for “phase shifting means”.

Claims 6 and 20 have also been amended for clarification purposes. Specifically the phrase “for 1-N times (in which N is an integer greater than or equal to two)” has been amended to recite, “N times (in which N is an integer greater than or equal to one) where the phase shift equals  $\Delta\theta^*_n$  (in which n is in the range of 1 to N)”. Also any reference to “for 1-N times” has been replaced with “for N times”. Additionally, Claim 6 is amended to provide antecedent basis for the phrase “said comparison means”.

Claim 17 has been amended herewith to recite “a demodulation step” instead of “said third step”.

Claim 21 has also been amended, removing one of the three signals that were originally listed in the claim. Specifically, the phrase “said known for transmission and” has been removed. Accordingly, the amended claim only has two signals being correlated, said known signal inserted at transmission and said known signal after digital conversion. This amendment is supported by the specification. In the rejection, the Examiner invited the applicant to indicate which portion of the specification supports the claimed limitation. The Examiner is invited to review pages 13-15 of the disclosure for support.

Claims 8 and 22 have been amended for clarification purposes, replacing the phrase “for N times”, with the phrase, “for M times”. It is sufficient to state that the comparison is repeated for M times. Support for the amendment can be found on page 13, lines 7-15. “Next, check is performed whether detection of the optimal phase shifting amounts is performed for M times.”

Furthermore, as suggested in paragraph 1 of the outstanding Official Action, the non-elected claims have been listed as withdrawn.

In the outstanding Office Action, the Examiner rejected Claims 1 and 15 under 35 U.S.C. § 103(a) as being unpatentable over Shinagawa et al. JP-07-297870 (hereinafter “Shinagawa”) in view of Bruekers et al. (U.S. Patent No. 5,784,414) (hereinafter “Bruekers”).

Claims 1, 3, 15, and 17 have been amended to specify that the phase shifting occurs before digital conversion by the A/D converting means.

The claimed invention is characterized by adjusting a phase of a signal which is input to the A/D converters. As a result, the circuit can keep appropriate sampling time of the input

signal, while not lowering the accuracy of the converted signal even if the sampling frequency is low and therefore the power consumption is not increased.

In stark contrast, the cited references, teach a phase shift of the signal after digital conversion by an A/D converter. It is clear that Shinagawa does not disclose a circuit in which the shifting means is provided on the input side of the A/D converter. Therefore, Shinagawa cannot and does not provide the invention of Claims 1 and 15. The sampling frequency in the A/D converter must be raised in Shinagawa to raise the accuracy of the conversion.

Bruekers does not remove this deficiency. While Bruekers recognizes that an increase in sampling frequency causes an increase in power consumption, Bruekers does not provide any phase shifting prior to A/D conversion.

Accordingly, Applicant respectfully submits that amended Claims 1, 3, 15 and 17 are patentably distinct from the hypothetical combination of the cited references.

Additionally, Applicant submits that Claims 9 and 23 are allowable for at least the same reasoning as applied to independent Claims 1 and 15 based upon their dependency from them.

Based upon the foregoing amendments and arguments, Applicant respectfully requests the Examiner to withdraw the rejection of Claims 1-10, 15-24 under 35 U.S.C. § 112, first and second paragraphs. In addition, Applicant respectfully requests the Examiner to withdraw the rejections of Claim 1, 9, 15, 23 under 35 U.S.C. 103(a) and the objection to claims.

In conclusion, the Applicant believes that the above-identified application is in condition for allowance and henceforth respectfully solicits the Examiner to allow the application. If the Examiner believes a telephone conference might expedite the allowance of this application, the Applicant respectfully requests that the Examiner call the undersigned, Applicant's attorney, at the following telephone number: (516) 742-4343.

Respectfully submitted,

  
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